

## **Appendix B**

### **Articles Written by MDOT for Public Education**





## What is Storm Water Runoff?

One of the most significant, yet unrecognized groups of water contaminants is *storm water pollutants*. When it rains, storm water runs over yards, streets, roads, highways, parking lots, parks, and playgrounds, carrying with it everything in its path, including debris and pollutants. Eventually, the water will travel to a stream, either over land or via a storm drain. Storm drains are frequently located alongside streets and parking lots. Unlike sanitary sewers that divert water to a treatment plant directly from your home, storm drains lead directly to surrounding lakes and rivers without any type of treatment. All the debris and pollutants that were picked up by storm water runoff, end up in your lakes and streams!

## Where Does the Pollution Come From?

Most contaminants are made up of common items used by residents, businesses and visitors, such as fertilizers, car oils and greases, yard clippings, soil, and pet wastes. Below are some tips you can follow to help keep pollution from entering lakes and streams via storm water runoff.

### | Tips to Keep Your Rivers, Lakes and Streams Clean

- Never dump anything down a storm drain!
- Use an oil pan when changing oil to keep fluids off the pavement. Check local body shops and quick lubs to find a place to appropriately dispose of used oil.
- Dispose of pet wastes in a trash can.
- Leave grass clippings on your lawn as an alternate nutrient to fertilizer. If a fertilizer is necessary, choose a slow-release product and test your soil to find out how much fertilizer your lawn actually needs.
- Wash your car on your lawn so excess water, chemicals, and dirt is filtered through the lawn.
- Keep household hazardous wastes, such as harsh cleaners, paint, car fluids, and batteries from entering lakes and streams by disposing at a household hazardous waste center. Try using environmentally-safe alternatives or recipes with non-hazardous ingredients.
- Use a broom rather than a hose to clean up grass clippings and dirt.
- Keep a trash bag in your car... and use it!

*Look for more articles about storm water pollution prevention in future issues. For more information about MDOT's Storm Water Management Plan, check out [www.mdot.state.mi.us/stormwater](http://www.mdot.state.mi.us/stormwater).*



TETRA TECH MPS

## **Working Together...Better Roads, Cleaner Streams**

Clean water is something that is easily taken for granted. According to the U.S. Environmental Protection Agency's (USEPA's) Report, *Liquid Assets 2000: America's Water Resources at a Turning Point*, the number one threat to water quality is polluted runoff. Runoff is precipitation that falls on highways and roads, then carries pollutants and debris into streams, rivers, lakes, and ponds. Pollutants and debris can include sediment from construction sites, oil and leaking chemicals from cars and trucks, excess fertilizer from our yards, and a host of other pollutants. It will take our combined efforts to help reduce the amount of potential pollutants that enter Michigan's waterways.

One way to address this threat to water quality is to develop and implement a Storm Water Management Plan. This is exactly what the Michigan Department of Transportation is doing. This plan has a common mission: Working Together...Better Roads, Cleaner Streams. The three major components of the plan are the Illicit Discharge Elimination System, the Public Education Plan, and the Storm Water Pollution Prevention Plan. This management plan also fills the requirements of the USEPA's National Pollutant Discharge Elimination System Phase 1 Rules.

This article is a prelude to a series of articles that will be in future publications of *MDOT Today*. The topics of each article in the series are listed below. The intent of the articles is to explain what **YOU** can do to help protect Michigan's precious water resources.

- MDOT Storm Water Management Plan
- What is Storm Water Runoff?
- Storm Drain Stenciling- You Dumped *What* Down a Storm Drain?
- Car Care and Your Water: What's the Connection?
- Hazardous Waste in Your Home
- Is Your Home Improvement Project Water Friendly?
- Smart Care for your Lawn and Garden

*Please check out our web site for more information and links to other related sites at [www.mdot.state.mi.us/stormwater](http://www.mdot.state.mi.us/stormwater).*



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## MDOT's Storm Water Management Plan

According to the U.S. Environmental Protection Agency (USEPA) and supporting research, pollutants that are washed off roads and highways by rain and snow melt, known as *runoff*, may impair the quality of our water resources. These are resources that we use for drinking, boating and fishing that also provide habitat to a variety of plants and animals. To address these concerns, in 1990 the USEPA developed rules establishing Phase I of the National Pollution Discharge Elimination System (NPDES). Under the Phase I program, MDOT is required to submit a Notice of Intent to develop a comprehensive and coordinated effort to preserve and improve the quality of water in a number of Michigan communities by reducing storm water runoff from MDOT's roadways and facilities. The Michigan Department of Environmental Quality (MDEQ) has issued an NPDES Permit to Ann Arbor, Flint, Grand Rapids, Sterling Heights, Warren, and Livonia. This permit requires MDOT to submit a **Storm Water Management Plan** that outlines MDOT's current and planned future activities to reduce the impact of storm water on our water resources.

MDOT's Storm Water Management Plan addresses concerns of highway runoff in concert with several other plans, such as the Illicit Discharge Elimination Plan (IDEP), the Public Education Plan (PEP), and the Pollution Prevention Plan (PPP). The IDEP aids in keeping illicit discharges out of the waterways by investigating MDOT highway drainage facilities to ensure that there are no illegal taps from sanitary or storm water sewers. The PEP educates the public through a variety of media, including the MDOT Storm Water Management web site and brochure. A theme slogan will be repeated on all educational materials, "Together...Better Roads, Cleaner Streams." Under the PPP, MDOT is maintaining the effectiveness of its storm drain catch basins and street cleaning program, and addressing controls to reduce the discharge of pollution associated with highway operation and maintenance and the application of herbicides and fertilizers applied to public right-of-ways. In addition, MDOT is currently developing a training program for its employees and contractors to ensure that they are informed about storm water pollution prevention activities associated with highway development, operations and maintenance.

The Storm Water Phase II Final Rule is the next step in EPA's effort to protect water resources. The Phase II program expands the Phase I program by requiring "small" municipal separate storm sewer systems (MS4s) and operators of small construction sites to apply for an NPDES permit, most likely under a general rather than individual permit, and to implement best management practices for controlling storm water discharge. The permitting authority for Michigan will designate small MS4s by December 8, 2002, which is projected to be a minimum of 252 communities and potentially up to 600. Permit applications will be due by March 10, 2003.

Look for more articles about storm water pollution prevention in future issues, including topics such as:

- Storm Water Runoff
- Storm Drain Stenciling
- Car Care and Your Water
- Household Hazardous Waste
- Water Friendly Home Improvement Projects
- Lawn and Garden Care

For more information about MDOT's Storm Water Management Plan, check out [www.mdot.state.mi.us/stormwater](http://www.mdot.state.mi.us/stormwater).



**TETRA TECH MPS**

## **Car Care and Your Water: What's the Connection?**

Your car and how well you maintain it have a significant impact on the lakes and streams near you. Cars carry many different hazardous fluids and require natural resources to run. How efficiently or inefficiently our cars use these resources and carry these fluids has a direct impact on our environment. When a vehicle is poorly maintained, and the maintenance activities are carelessly conducted, chemicals may spill or drip onto the pavement and, eventually, are carried by snow melt or rain into our streams and lakes. A well-maintained vehicle uses less gasoline and runs more efficiently without dripping chemicals onto the pavement or spewing excess exhaust into the air. Follow these simple guidelines to reduce the impact your car has on our streams, lakes and rivers – and save yourself money, too!

### **Car washing**

While washing your car, the water collects soap, detergents, residues from exhaust fumes, gasoline and motor oils. Eventually, the water washes off the car and onto the pavement, collecting additional debris and pollutants before flowing down to the nearest storm drain. Unlike the treated water that comes out of a faucet in your home or at work, water that goes into storm drains flows directly to the lakes and streams near you with everything it has collected along the way!

**TIP: Use water friendly soaps!**

Many commercial grade soaps contain non-biodegradable detergents and acids. If you wash your car at home, try buying soaps that are labeled “non-toxic”, “phosphate-free”, or “biodegradable”. The safest products for the environment are vegetable-based or citrus-based soaps.

#### ***Car Soap Recipe***

*1/4 cup vegetable oil-based liquid soap  
(such as Dr. Bronner's or Murphy's)*

*1 gallon warm water*

**TIP: Prevent the water from reaching the storm drain!**

Minimize the amount of water running into a storm drain by washing your car on the lawn instead of the driveway. This will not only give your lawn a watering, but the grass and soil will naturally filter out some of the harmful chemicals or fluids. Remember, whenever possible, shut off the hose to prevent wasting water.

### **Car fluids**

Vehicle fluids include any fluid normally used during operation, such as engine oil, transmission fluid, power steering fluid, brake fluid, and radiator fluid. When these fluids leak or drip out of the car onto the pavement or are improperly disposed, even in small amounts, they eventually run off into storm drains, lakes, and streams where they can contaminate water supplies and kill fish and other aquatic life. In some cases, if a drinking water supply is contaminated, it can be costly to correct and poses a health risk to humans. The cost to treat this contaminated water is passed onto consumers. If your drinking water is supplied by a well, the possibility of contamination may even be greater. Proper vehicle maintenance and good housekeeping when conducting vehicle maintenance activities can help protect your water resources and your wallet, too.

**TIP: Check for leaks!**

Have your vehicle checked for leaks at least once every three months. If you change your own oil, be sure to dispose of the used motor oil at an oil recycling center and not on the ground or down a storm drain. Many

facilities that sell and change oil will accept your used oil, including quick lubes, Wal-Mart and Murray's Auto Center. Call your local businesses to find the most convenient place for you to dispose of your used fluids properly.

**TIP: Clean up spills!**

It is always a good idea to use an oil pan when working on your vehicle to prevent accidental spills. If you do spill, pour cat litter, sawdust, or cornmeal to absorb the spilled materials. Let this dry for a few hours and then sweep up the absorbents. If the spill is less than one gallon, place the absorption grains in a heavy-duty garbage bag and dispose with your trash. Otherwise, take the material to your local household hazardous waste drop-off site.

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**Household Hazardous Waste Contacts**

Genesee County  
(810) 244.8524

Kent County  
(616) 336.3695  
or 336.2501

Washtenaw County  
(734) 971.7356

Wayne County  
(734) 326.3936

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*Look for more articles about storm water pollution prevention in future issues. For more information about MDOT's Storm Water Management Plan, check out [www.mdot.state.mi.us/stormwater](http://www.mdot.state.mi.us/stormwater).*



**TETRA TECH MPS**

## **Is Your Home Improvement Project Water Friendly?**

What a rewarding feeling it is to complete your own home improvement project! But did you know certain practices could contribute to water quality problems in Michigan's lakes and streams if special care isn't taken? Rainwater washes wastes from roads, driveways and yards into the nearest storm drain and/or body of water. Unlike the wastewater in your home which is cleaned at a wastewater treatment plant or in your septic system, anything that goes into a storm drain is routed directly into lakes and streams... untreated!

The following suggestions will help you decrease the amount of pollution coming from your home.

### **| Painting dos & don'ts**

When painting your house, trim, fencing or anything outside, consider alternatives to your usual routine. A little bit of planning can go a long way in reducing the impact your activities have on our water resources.

**TIP: Use latex paint.**

Choose water-based paints over oil-based paints. They're less toxic.

**TIP: Keep track of paint age.**

Don't use paints over 15 years old because they may contain toxic levels of lead.

**TIP: Dispose of paints properly.**

Excess paint, thinners, solvents, saturated rags, empty aerosol cans, lead paint chips and chemical paint stripping residue are considered hazardous waste and should be taken to a household hazardous waste site.

**TIP: Recycle!**

Reuse paint thinner or cleaning solvents. Set aside in a closed jar to settle out paint particles, then pour off clear liquid for future use. Be sure you label the jar so you don't forget what is inside!

**TIP: Buy only what you need.**

Try to determine the amount of paint you will need. If you have too much, save it and donate it to an organization.

### **Concrete, masonry, and tile work**

Construction of new driveways, patios, walkways and other brick and concrete structures can greatly impact water quality during the construction process, as well as after the structure is built. Surfaces such as concrete and roofed areas increase the volume and velocity with which rainwater travels to streams. These types of surfaces do not provide an opportunity for the water to infiltrate into the ground – a process that naturally filters out pollutants collected by rainwater. Try using alternatives, like gravel, brick or flagstone, which allow some water to infiltrate down into the earth. If you must use concrete and impervious materials, try to minimize their effect by sloping such surfaces toward vegetated areas.

**TIP: Don't use your hose as a broom!**

Never wash excess material from bricklaying or patio/driveway construction into a storm drain. Also, don't hose down driveways, sidewalks, or streets into storm drains. Use a broom instead to sweep up and dispose of waste in the trash. **TIP: Reuse!**

Collect and reuse excess sand and gravel.

**TIP: Make clean-up simple.**



Set up and operate small cement mixers on heavy tarps or drop cloths. Once construction is complete, recycle residual or dispose of it properly.

**TIP: Watch the weather.**

Apply driveway sealant when rain is not forecasted. If you apply sealant prior to a heavy rain, some of the sealant will wash off, reducing effectiveness of the remaining sealant while also running off to pollute streams, lakes and rivers. Cover bags of cement and mortar after opening to keep wind-blown dust away from gutters and storm drains.

**Landscaping**

Many landscaping projects have the potential for exposing soils and adding chemicals to your lawn and garden. When fertilizers, pesticides and herbicides are not applied correctly, storm water will wash the excess into nearby lakes, streams, and storm drains.

Here's how you can prevent erosion and reduce the impact of your lawn and garden on water resources:

**TIP: Watch the weather.**

Schedule grading projects for dry weather and replant as soon as possible. If there is lag time between the grading and the final planting, temporary vegetation may be necessary, like an annual grass seed.

**TIP: Landscape with hardy plants.**

Choose disease- and pest-resistant plant varieties appropriate for your soil and climate.

**TIP: Mulch it!**

Cover exposed soil in the garden with 2-3 inches of mulch to prevent weeds from surfacing. Don't forget, pulling weeds is a great alternative to spraying with chemicals!

**TIP: Let your clippings lay.**

Cut grass is natural mulch (and free fertilizer) for your lawn. A mulching mower will cut clippings into tiny pieces, and will allow for quicker and easier decomposition.

**TIP: Compost... the miracle drug for your yard.**

Compost is a natural, slow-release fertilizer that retains water when added to sandy soils and improves drainage when added to clay soils.

**TIP: De-bug.**

Remove pest-infested plants in the fall. Remove insect eggs, larvae, cocoons, and adults from plants by hand.

**TIP: Test your soil.**

If you think a fertilizer is necessary, test your soil first. A soil test will tell you how much nutrients your lawn or garden have so that you will not over-apply.

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**For more details on landscaping projects, contact your local MSU Extension Office**

Genesee County	Kent County	Macomb County	Washtenaw County	Wayne County
(810) 244.8524	(616) 336.3265	(810) 469.5180	(734) 997.1678	(313) 833.3412

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## TETRATECH MPS

A to Z...

### Household Hazardous Waste Products

aerosols  
ammunition  
antifreeze  
asbestos  
asphalt and roofing tar  
auto fluids  
batteries  
bleach  
brake fluid  
caulk  
DDT and chloride  
drain cleaner  
explosives  
flammables  
furniture/floor polish  
gasoline  
glues  
herbicide (weed killer)  
kerosene  
lye  
moth balls  
motor oil  
mouse/rat poison  
nail polish/remover  
old medicine  
oven cleaner  
paint thinner and stripper  
pesticide (bug killer)  
photographic chemicals  
propane  
shoe polish  
smoke detectors  
(radioactive)  
swimming pool chemicals  
toilet bowl cleaner  
toner cartridges  
transmission fluid  
varnish  
wood preservatives

## Hazardous Waste in Your Home?

Surprisingly, many of the products we use in our home everyday are hazardous if they are used, stored, or disposed of improperly. These products can make their way into our water supplies - such as our lakes and streams - where they can be harmful to the plants and animals, or even contaminate drinking water supplies or make recreational activities, such as swimming or fishing, unsafe.

Always check the label to see if a product is hazardous. A product may be hazardous if the label has a picture of a skull and cross bones or, if it contains the words WARNING, CAUTION, DANGER or POISON.

### Hazardous Chemical Properties

A product is considered hazardous if it is has one or more of the following properties:

- Toxic — poisonous or capable of causing acute illness;
- Flammable — ignitable and burns easily;
- Corrosive — eats through other materials; or
- Reactive — can possibly explode or react with other chemicals.

## How to Reduce the Impact of Household Hazardous Waste

There are many actions you can take to reduce the impact of household hazardous waste. The list below highlights a few simple steps you can follow to protect your streams and lakes.

### TIP: Only buy what you need

Reduce your waste and save money by purchasing only what you will use.

### TIP: Label it!

Keep unused portions in their original containers with labels intact and readable so that the product can be identified.

### TIP: Store products properly

Store hazardous materials in a cool, dry place inaccessible to children and pets. Some chemicals may become volatile in warm or hot climates, or dry out to the point where they are unusable. You'll save money, reduce waste and prevent potential accidental spills or exposure.

### TIP: Follow directions

Use products in accordance with the manufacturer's directions and follow all safe-handling requirements.

### TIP: Give away extras

Offer surplus portions of products that are useable and safely packaged to others. For instance, offer pesticides to nurseries and paint to theater groups.

**For more information on household hazardous waste and disposal centers in your area, contact:**

**Genesee County  
(810) 244-8524**

**Kent County  
(616) 336-3695 or 336-2501**

**Macomb County  
(810) 469-5467**

**Washtenaw County  
(734) 971-7356**

**Wayne County  
(734) 326 – 3936**

*Look for more articles about storm water pollution prevention in future issues. For more information about MDOT's Storm Water Management Plan, check out: [www.mdot.state.mi.us/stormwater](http://www.mdot.state.mi.us/stormwater).*

**TIP: Dispose products properly.**

Properly dispose of household hazardous waste, because if it is simply landfilled, it can end up vaporizing or leaking into our ground water. These wastes should be recycled or taken to a household hazardous waste drop-off site or event for proper disposal. Contact your local disposal center for additional information on proper disposal and hazardous waste drop-off locations and dates.

**TIP: Use non-toxic alternatives.**

Reduce the amount of hazardous wastes you purchase by using non-toxic alternatives listed below.

Toxic Products	<i><b>Non-Toxic Alternatives</b></i>
Oil based paint	Latex paint
All purpose cleaner	One cup vinegar mixed in a gallon of warm water
Disinfectant / Bleach	Borax brand detergent (mix half a cup in a gallon of warm water)
Window Cleaner	One part vinegar to four parts warm water
Carpet Deodorizer	Sprinkle with baking soda then vacuum after 30 minutes
Furniture / Floor Polish	Murphy's Oil Soap or equal parts of mineral oil and lemon oil
Floor Cleaner	Mix ¼ cup white vinegar and ¼ cup baking soda with one gallon warm water; polish with club soda or add skim milk to rinse water for shine
Abrasive Cleaners	Bon Ami brand cleanser, Clorox Soft Scrub or baking soda
Drain Cleaner	Plunger or plumber snake; rinse with ¼ cup baking soda and 2 ounces vinegar
Fabric Softener	½ cup white vinegar and ¼ cup baking soda
Mildew Remover	Lemon juice and salt; or white vinegar and salt
Oven Cleaner	Baking soda and water
Flea Collars	Use a collar with pyrethrum
Herbicides	Pull weeds or mulch
Pesticides	Soap sprays
Mouse / Rat Poison	Use live traps
Wood Preservatives	Urethane

## Smart Care for Your Lawn and Garden

Lawns and gardens often require watering during the summer and early fall. Overwatering is not only bad for your lawn, it's a strain on water supplies and often ends up as wasted, excess runoff to lakes and streams.

### Watering Your Lawn

According to Michigan State University Extension Office research, lawns generally require 1/2 to 1-1/2 inches of water per week, applied in small amounts throughout the week. Light, frequent watering supports healthy grass and resists disease and pests. The best schedule for watering is 15 - 20 minutes per day between noon and 4:00 p.m. when the grass is under the most stress. If daily watering is not practical for you, local horticulture specialists suggest an every-other-day schedule of 30 - 40 minutes. For best results, combine light, frequent watering with grass mulching and slow-release fertilizer applications.

### Reduce Your Watering: Feed Your Lawn with Grass Clippings!

Clippings are 85 percent water. Short clippings quickly decompose, adding valuable nutrients to the soil. By mulching grass, fertilizers can be reduced by 30 percent or more! A common myth is that grass clippings cause thatch, a layer of living and dead roots and stems growing between the green layer and the soil. Troublesome thatch is actually caused by improper use of lawn chemicals, compacted soils, and excessive watering.

#### **TIP: Mow High!**

Set mower blade at the highest setting, leaving grass blades 3" tall. Tall grass encourages deep roots, which require less water, and also shades out crabgrass and low-growing weeds. It also makes your lawn less vulnerable to drought.

#### **TIP: Mow Frequently!**

Remove no more than the top 1/3 of the grass blade.

#### **TIP: Let your clippings lay**

Let the short grass blades fall back onto the lawn. A mulching mower will cut grass blades into small pieces that can decompose quicker.

#### **TIP: Properly maintain your lawn mowing equipment**

Use a sharp mower blade. A dull mower blade will tear grass and provide an entry way for diseases. Keep the mower deck clean.

#### **TIP: Watch the weather**

Mow when the grass is dry.

### Fertilizing Your Lawn

In the case of fertilizer, more is NOT better! Over-applied fertilizer will wash off your lawn when it rains and pollute lakes and streams. Excess fertilizer may also move past the root zone and contaminate your drinking water supplies.

#### **TIP: Know what your lawn needs!**

A soil test will tell you what nutrients are already contained in your lawn so that you are not over-applying fertilizers. Soil-test assistance with interpreting test results are available from your local Michigan State University Extension Office.

## For more guidelines on composting yard waste in your community:

Ann Arbor  
Solid Waste Department  
(734) 994-2807

Yard waste curbside collection for labeled paper yard waste bags and bundles tied with twine, or use the drop-off station at 2950 E. Ellsworth, (734) 971-7400.

Flint Sanitation Department  
(810) 766-7076

Yard waste curbside collection from mid-April to December. Pick-up is the day after regular trash pick-up. Brown paper yard waste bags or 25-32 gallon trash cans ONLY!

Grand Rapids  
Sanitation Department  
(616) 456-3232

Yard waste curbside collection with regular trash pick-up. Must purchase City's clear yard waste bags or purple tags for bundles, available at local fire stations, supermarkets, neighborhood stores, or the city treasury office.

Livonia  
Department of Public Works  
(734) 466-4655

Yard waste curbside collection with regular trash pick-up. Label 30-gallon containers or use paper yard waste bags. Small, tied bundles are accepted.

Sterling Heights  
Department of Public Works  
(734) 446-2489

Yard waste curbside collection with regular trash pick-up. Label 30-gallon containers or use plastic or paper yard waste bags. 40-pound or less bundles tied with twine or duct tape are accepted.

Warren Sanitation Department  
(810) 775-1400

Yard waste curbside collection with regular trash pickup starting the first day of spring until end of December. Use brown paper lawn bags or a 32-gallon container labeled with a City-issued, yard waste label. Small, tied bundles are accepted.

### **TIP: Pick the right fertilizers**

Select a slow-release fertilizer to promote steady, uniform growth and to protect water quality. Slow-release options include organic fertilizers, products with water-insoluble nitrogen (marked "W.I.N." on the label), and products with synthetic coatings.

### **TIP: Fertilize only when necessary**

Fertilize in September or October to promote root growth rather than top growth. Deep roots withstand drought and resist disease. Strong roots store food produced in the grass blades for use in early spring.

### **TIP: Stay away from combined fertilizers**

Separate fertilizers from pesticides. Combination "weed and feed" products often contain unnecessary herbicides.

### **TIP: Know your compost**

Use screened compost as a top dressing on the lawn. Compost contributes organic matter and gradually releases nutrients to the soil.

## What should you do with extra grass clippings?

There are a variety of ways you can manage excess grass clippings. Below are several suggestions.

### **TIP: Compost it!**

Mix grass clippings with leaves and soil to make a compost pile.

### **TIP: Mulch it!**

Use clippings as garden mulch.

### **TIP: Buy a new mulching blade**

Retrofit your present mower with a mulching blade. For optimal safety and performance, select a mulching blade or kit (blade and chute cover) that is specifically designed to fit the model of your mower. For a rear discharge mower, the discharge chute should be covered for safety.

Some older mowers can be used to mulch by raising the mower blade and cutting more frequently. Before attempting to use your mower to recycle grass, consult your owner's manual or local equipment dealer. You may want to consider purchasing a new mower. Mulching mowers powered by battery, electricity, and gasoline are popular choices. Manual push mowers do not emit exhaust fumes and are also available with easy-roll wheels.

### **TIP: Recycle it!**

Remember, state law prohibits yard waste in landfills. Contact your city's sanitation or environmental department to see if they have a curbside collection program specifically for grass clippings and other yard waste.

*For more information about MDOT's Storm Water Management Plan, check out [www.mdot.state.mi.us/stormwater](http://www.mdot.state.mi.us/stormwater).*



TETRA TECH MPS

## You Dumped WHAT Down that Storm Drain?

Many people do not realize that when they dump a bucket of oil or toxic material into a storm drain, they are dumping it directly into their streams, lakes and rivers! Storm Drain Stenciling is a hands-on program that raises awareness of the harmful effects of dumping hazardous materials into storm sewers. Traditionally, the message “Dump No Waste – Drains to Stream” is spray-painted onto the concrete next to storm drains, using a plastic or Mylar stencil. Volunteers gain a sense of making a difference in their community, while local residents learn more about their surroundings. Recent studies in Wisconsin and Washington show that storm drain stenciling worked to raise citizen awareness of storm drain connections to local lakes and rivers. Over 75 percent of people who had seen the stenciled drains knew where their water went, compared to about a third of those who had not seen a stenciled drain.

More permanent alternatives are available than spray painting, such as plastic curb markers. Many communities have custom door hangers given to residents in the targeted areas that are stenciled or labeled. The door hangers describe the program, effects of dumping hazardous materials into storm drains and proper disposal methods. Stenciling can usually be done with a group of three to five people.

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For additional information about storm drain stenciling, contact:

Huron River Watershed Council  
(734) 769-5123

Clinton River Watershed Council  
(248) 853-9580

Friends of the Rouge  
(313) 792-9628

Genesee County MSU Extension  
(810) 244-8500

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